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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,979	04/16/2004	Thomas Aisenbrey	INT03-011	8744

7590 10/19/2005

STEPHEN B. ACKERMAN
28 DAVIS AVENUE
POUGHKEEPSIE, NY 12603

EXAMINER	
TRAN, CHUC	

ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/825,979	AISENBREY, THOMAS	
	Examiner	Art Unit	
	Chuc D. Tran	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18,20-49 and 54-58* is/are rejected.

7)☒ Claim(s) *19 and 50-53* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *4/16/04* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed Aug 8, 2005 have been fully considered but they are not persuasive.

Applicant argues that the patent for Jones et al does not discloses a second loop, the loop and the second loop each comprises multiple turns of the conductive load, a metal powder, an electrically insulating layer surrounding the loop, forming any type of inductive device from the fibers. The Examiner respectfully disagree. The Jones et al clearly teach in Fig. 1 & 2: the second loop (215), the loop and the second loop each comprises multiple turns of the conductive load (Fig. 2A), a metal powder (310), an electrically insulating layer surrounding the loop *See* (Col. 5, Line 50), forming any type of inductive device from the fibers *See* (Abstract).

Claim Objections

2. Claims 20 and 38 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitation "conductive loaded resin based material" in claims 20 and 38, and already recited in claims 1 and 28. Applicant is encouraged to implement this type of language in the interest of improving it's clarity.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-18, 20-49 and 54-58 are rejected under 35 U.S.C. 102(b) as being anticipated by Jones et al (USP. 5,744,090).

Regarding claims 1, 20 and 38, Jones disclose an inductor device comprising a loop of conductive loaded, resin-based material (Fig. 2A) comprising conductive materials (110) in a base resin host (100) (Fig. 1) (Col. 3, Line 60).

Regarding claims 2, 29 and 46, Jones disclose that the ratio, by weight, of said conductive materials to said resin host is between about 0.20 and about 0.40 (Col 5, Line 14).

Regarding claims 3, 30, 47 and 49, Jones disclose that the conductive materials comprise metal powder (Col. 6, Line 24).

Regarding claim 4, Jones disclose that said metal powder is nickel (Col. 6, Line 19).

Regarding claims 5 and 31, Jones disclose that said metal powder is metal plated (Fig. 2)

Regarding claim 6, Jones disclose that said metal plating is nickel (Col. 6, Line 19).

Regarding claims 8-10, 14, 32-33 and 35, Jones disclose that said conductive materials comprise non-metal powder (Col. 5, Line 50), wherein said non-metal powder is carbon (Col. 6, Line 24).

Regarding claims 11-12, 34 and 48 Jones disclose that the conductive materials comprise micron conductive fiber (Col. 5, Line 35), wherein said micron conductive fiber is nickel plated carbon fiber (Fig. 1).

Regarding claims 7 and 13, Jones disclose that said micron conductive fiber has a diameter of between about 3 um and about 12 um (Col. 5, Line 39) and a length of between about 2 mm and about 14 mm (Col. 9, Line 33).

Regarding claims 15, 36 and 56, Jones disclose that an electrically insulating layer surrounding said loop (core structure) (Col 5, Line 53).

Regarding claims 16, 21 and 37, Jones disclose that said electrically insulating layer is resin-based material (Col. 6, Line 19).

Regarding claim 17, Jones disclose that said loop and said electrically insulating layer are flexible (Col. 7, Line 50).

Regarding claims 18, Jones disclose that said loop further comprises core structure located inside said loop (Fig. 2A), wherein said core structure alters the inductance of said loop (Col. 7, Line 50).

Regarding claim 22, Jones disclose that said core structure comprises a metal (Fig. 2A).

Regarding claim 23, 25, 39 and 41, Jones disclose that said loop comprises multiple turns of said conductive loaded resin-based material (Fig. 2A).

Regarding claims 24 and 40-41, Jones disclose that a second loop of said conductive loaded resin-based material (Fig. 2A); and

a core structure located inside said loop and inside said second loop wherein said core structure inductively couples said loops (Fig. 2A).

Regarding claim 25 , Jones disclose that said loop and said second loop each comprises multiple turns of said conductive loaded resin-based material (Fig. 2A).

Regarding claims 26-27 and 42-43, Jones disclose that said loop is used to generate and to detect a magnetic field (Abstract).

Regarding claim 28, Jones et al disclose an inductor device comprising:

- a conductive loop (215) (Abstract, Fig. 2B); and

- a core structure (217) located inside said loop wherein said core structure comprises conductive loaded resin-based material (300) comprising conductive materials (310) in a base resin host (220) (Fig. 2).

Regarding claim 44, Jones disclose a method to form an inductor comprising:

- providing a conductive loaded resin-based material comprising conductive materials in a resin-based host (Col. 3, Line 16); and

- molding said conductive loaded resin based material into an inductor device (Col. 3, Line 18).

Regarding claim 45, Jones disclose that said molded conductive loaded resin-based device comprises a core (Col. 5, Line 53).

Regarding claim 54, Jones disclose that said molding comprises:

- loading said conductive loaded resin-based material into a hopper (Fig. 1) ;

- extruding said conductive loaded resin-based material out of said hopper through a shaping outlet (Col. 5, Line 3); and

- curing said conductive loaded resin-based material to form said inductor device (Col. 5, Line 1).

Regarding claim 55, Jones disclose that stamping or milling said molded conductive loaded resin based material (Col. 5, Line 29).

Regarding claims 56-58, Jones disclose the method of forming an electrically insulating layer over the inductive device (Col. 5, Line 50).

Allowable Subject Matter

5. Claims 19 and 50-53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

7. Regarding claim 19, the references of the Prior Art of record fails to teach or suggest the combination of the limitation as set forth in the claims: the core structure is a vehicle.

8. Regarding claim 50, the references of the Prior Art of record fails to teach or suggest the combination of the limitation as set forth in the claim: the method of removing the inductor device from the mold.

Regarding claims 51-53 are allowable for the reason given above because of their dependency status from the claim 50.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuc D. Tran whose telephone number is (571) 272-1829. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Primary Examiner

TC
October 16, 2005